REMARKS

Claims 1 and 3-14 are pending in this application. By the Office Action, claims 1 and 3-14 are rejected and claims 15-16 are withdrawn from consideration. By this Amendment, claim 1 is amended and claims 15-16 are canceled. Support for amended claim 1 can be found in the specification at least at page 5, lines 34-35, page 6, lines 29-32, original claim 5, and in the Figures. Thus, no new matter added. In view of the amendments and the following remarks, reconsideration and allowance are respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

I.   Rejection under §112, second paragraph

The Office Action rejects claims 1 and 3-14 under 35 U.S.C. §112, second paragraph. Specifically, the Office Action states that in the phrase "detecting a signal representing a first molecule," in claim 1, the term "representing" is a non-specific relational term. Applicants respectfully traverse this rejection for at least the reason that one of ordinary skill in the art would be able to determine the relationship between the "signal" and "the first molecule." However, in order to advance prosecution, Applicants amend claim 1 to replace the term "representing" with the term "from" as suggested in the Office Action. This amendment in no way narrows the scope of claim 1.

Claim 1, and claims 3-14 dependent thereon, satisfy the requirements of 35 U.S.C. §112, second paragraph. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

II.   Rejection under §102

A.   Noblett

The Office Action rejects claims 1 and 4-10 under 35 U.S.C. §102(e) over U.S. Patent No. 6,362,004 to Noblett ("Noblett"). Applicants respectfully traverse the rejection.

Amended claim 1 is directed to a method for imaging an array of discrete reaction sites on the surface of a solid support to detect the presence of molecules. The method includes imaging the array and detecting a signal from a first molecule located on the solid support at a known position within the array. Noblett does not teach this method.

Noblett describes a microarray analysis system that includes a fiducial mark for positioning and aligning the substrate. The fiducial mark reportedly improves the placement of the reaction sites on the microarray. (Col. 6, lines 29-34). More specifically, the fiducial mark is used during the microarray manufacturing process to determine the relative coordinates of the reaction sites positioned on the array. (Col. 6, lines 49-63). In Noblett, the fiducial mark is not within the actual array of reaction sites. As illustrated in Figures 2, 6 and 7, Noblett positions the fiducial mark at a separate and distinct location away from the array.

The instantly claimed signal analysis method utilizes a signal representing a first molecule (i.e., the reference molecule) to further align the inspection windows in registration with the discrete reaction sites. The claimed method utilizes the reference molecule to define a fixed location for subsequent alignment of further inspection windows. Distinguishable from Noblett, the instantly claimed method utilizes a signal from a first molecule located on the solid support at a known position within the array. Noblett does not teach this feature.

Thus, Noblett does not teach the instantly claimed method at least because the signal from the first molecule, i.e., the fiducial mark, is not within the actual array of reaction sites as claimed. For at least this reason alone, Noblett does not anticipate claims 1 and 4-10. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

B.   Juncosa

The Office Action rejects claims 1 and 3-11 under 35 U.S.C. §102(e) over U.S. Patent No. 6,309,601 B1 to Juncosa et al. ("Juncosa"). Applicants respectfully traverse the rejection.

Juncosa describes a scanning optical detection system. However, in no way does Juncosa teach a system that includes detecting a signal from a first molecule located on the solid support at a known position within the array, and by reference to the first molecule, aligning an *individual* inspection window in registration with *each* discrete reaction site, as recited in claim 1. That is, Juncosa teaches a system that utilizes a single inspection window that covers the array of reaction sites. Juncosa does not disclose the use of individual inspection windows aligned in registration with each discrete reaction site, as claimed.

As such, Juncosa does not teach each and every element of the method of claims 1. For at least this reason alone, Juncosa does not anticipate claims 1 and 3-11. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

III.   Rejection under §103

The Office Action rejects claims 12-14 over Juncosa in view of U.S. Patent No. 5,578,832 to Trulson et al. ("Trulson"). Applicants respectfully traverse the rejection.

The Office Action acknowledges that Juncosa does not teach or suggest the composition of the solid support, the covalent attachment of molecules to the surface of the array, and that the measured image must be above a predefined value. The Office Action relies on Trulson to teach these features in combination with Juncosa.

However, Trulson does not remedy the above detailed deficiencies of Juncosa. Trulson does not teach or suggest an imaging method that includes the instantly claimed features of (i) imaging an array and detecting a signal from a first molecule located on the solid support at a known position within the array, and (ii) by reference to the first molecule, aligning an individual inspection window in registration with each discrete reaction site. Thus, regardless of the teachings of Trulson, the combination of Juncosa and Trulson would not have taught or suggested, and would not have rendered obvious, to one of ordinary skill in the art, the method of claim 1. Claims 12 and 14 depend form claim 1 and also would not have been obvious.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

IV.   Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 3-14 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,
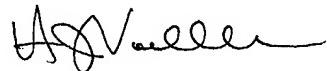
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